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**SEMICONDUCTOR PROCESSING APPARATUS COMPRISING CHAMBER  
PARTITIONED INTO REACTION AND TRANSFER SECTIONS**

Abstract of the Disclosure

Semiconductor processing equipment that has increased efficiency, throughput,  
5 and stability, as well as reduced operating cost, footprint, and faceprint is provided.  
Other than during deposition, the atmosphere of both the reaction chamber and the  
transfer chamber are evacuated using the transfer chamber exhaust port, which is  
located below the surface of the semiconductor wafer. This configuration prevents  
particles generated during wafer transfer or during deposition from adhering to the  
10 surface of the semiconductor wafer. Additionally, by introducing a purge gas into the  
transfer chamber during deposition, and by using an insulation separating plate<sup>(34)</sup>, the  
atmospheres of the transfer and reaction chambers can be effectively isolated from each  
other, thereby preventing deposition on the walls and components of the transfer  
chamber. Finally, the configuration described herein permits a wafer buffer mechanism  
15 to be used with the semiconductor processing equipment, thereby further increasing  
throughput and efficiency.

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